

JUL 24 2008

**CLAIM AMENDMENTS**

**CLAIMS:**

1. (Currently amended) Platinum based metal catalyst nano-particles of composition PtX, where X is Ru, of controlled particle size in the nano-size range of 0.8 to 10 nm and of selected atomic Pt:X percentage ratios in the range of 70:30 to 80:20, including a Pt/Ru alloy phase of 85:15 Pt:Ru atomic percentage ratio.
2. (Cancelled)
3. (Cancelled)
4. (Previously Presented) The catalyst nano-particles according to Claim 1, and consisting essentially of a PtRu alloy phase of 85:15 Pt:Ru atomic percentage ratio, a Pt phase and a Ru phase.
5. (Previously Presented) The catalyst nano-particles according to Claim 1, wherein the Pt:Ru atomic % ratio is 70:30 and the particle size is  $1.5 \pm 0.5$  nm.
6. (Previously presented) The catalyst nano-particles according to Claim 1, wherein the Pt:Ru atomic % ratio is 70:30, the particle size is  $1.5 \pm 0.5$  nm, and consisting essentially of a PtRu alloy phase of 85:15 Pt:Ru atomic percentage ratio, a Pt phase and a Ru phase.
7. (Original) The catalyst nano-particles according to Claim 1, wherein the catalyst particles are in the nano-size range of 1 to 5 nm.

8. (Original) The catalyst nano-particles according to Claim 1, deposited on or directly synthesized onto or into the internal porous structure of a support material, resulting in supported catalysts.

9. (Original) The catalyst nano-particles according to Claim 8, wherein the support is an electronic conductor of high surface area in the form of a metal, metal oxide, carbon based materials, gas diffusion electrodes or electronically conductive ceramics.

10. (Previously Presented) The catalyst nano-particles according to Claim 8, wherein the supported catalysts are in the form of electrodes to be used as anode or cathode in fuel cells for  $H_2$ , CO,  $CH_3OH$  oxidation reaction and  $O_2$  reduction reactions, respectively.

11. (cancelled)

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Previously Presented) The catalyst nano-particles according to Claim 1, wherein the Pt:Ru atomic % ratio is 80:20 and the particle size is  $1.2 \pm 0.5$  nm, and consisting essentially of a PtRu alloy phase of 85:15 Pt:Ru atomic percentage ratio, a Pt phase and a Ru phase.

21. (Cancelled)

22. (Cancelled)